

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Appln. No. 09/832,180

pack, thereby ensuring an ink flow passage,

wherein the contact prevention member is entirely located within an inner space of the ink pack.

30. (New) The ink cartridge as claimed in claim 29, wherein the contact prevention member is discrete from and does not form a portion of an outer surface of the ink pack.

REMARKS

Claims 1-24 have been examined. Claims 1, 3, and 8 have been rejected under 35 U.S.C. § 102(e), claims 12-14, 16, 18-20, and 22-24 have been rejected under 35 U.S.C. § 102(b), and claims 1-7, 9-11, 15, 17, and 21 have been rejected under 35 U.S.C. § 103(a).

I. Preliminary matters

A. Interview with the Examiner

Applicants' representative would like to thank the Examiner for the courtesies extended during the personal interview conducted on April 16, 2002.

B. Timely submission of present Amendment

As noted in the Petition to Reset the Period for Reply filed on January 25, 2002, the initial Office Action (dated December 6, 2001) was not timely received. In response to the Petition, the Examiner issued a Communication dated February 6, 2002, indicating that the period for reply has been reset. Applicants believe that the period for reply has been reset to run

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Appln. No. 09/832,180

from the mailing date of the Communication (i.e. February 6, 2002), and thus, this Amendment is timely filed within four months from the beginning of the period for response.

C. Non-final status of Office Action

Even though the initial Office Action dated December 6, 2001, is the first Office Action (on the merits) issued in the above-identified application, the Office Action Summary page inadvertently indicated that the Office Action is final. During the personal interview, Applicants' representative brought the mistake to the Examiner's attention, and she confirmed that the Office Action is non-final. Furthermore, during the interview, the Examiner changed the notation on the Office Action Summary page to indicate that the Office Action was not final and initialed such changes. A copy of the annotated Office Action Summary page is enclosed.

D. Objection to the specification

The Examiner has objected to the specification because it contains minor typographical errors. Applicants submit that the amendments to the specification overcome the errors.

II. Rejection under 35 U.S.C. § 102(e) over U.S.P. 6,158,853 to Olsen et al. ("Olsen")

Claims 1 and 3 have been rejected under 35 U.S.C. § 102(e) as being anticipated by Olsen,

A. Claim 1

Applicants submit that claim 1 is not anticipated (and would not have been obvious over) Olsen. For example, claim 1 relates to an ink cartridge that comprises an ink pack and a contact prevention member. The ink pack is formed into a flattened bag shape corresponding to a geometric shape, and the contact prevention member is attached to the interior surface of the ink pack and is disposed at a location that is separated from an outer edge of the ink pack corresponding to the geometric shape.

On the other hand, Olsen does not teach or suggest such feature. For example, assume *arguendo* that the side walls 32 and 32' shown in Figs. 1 and 2 of the reference generally correspond to an ink pack and that the rectilinear annulus 38a generally corresponds to a contact prevention member. Based on such assumptions, if the ink pack 32 and 32' is formed into a flattened bag shape corresponding to a geometric shape, the prevention member 38a would not be disposed at a location that is separated from an outer edge of the geometric shape.

Accordingly, Applicants submit that claim 1 is patentable over Olsen. Furthermore, during the interview, the Examiner tentatively agreed that Olsen does not suggest the claimed features above.

B. Claim 3

Since claim 3 depends upon claim 1, Applicants submit that it is patentable at least by virtue of its dependency.

III. Rejection under 35 U.S.C. § 102(e) over U.S.P. 6,030,074 to Barinaga (“Barinaga”)

Claim 8 has been rejected under 35 U.S.C. § 102(e) as being anticipated by Barinaga.

Applicants submit that the claim is patentable over the reference.

For example, claim 8 relates to an ink cartridge that comprises an ink pack which is filled with ink and is formed into a flattened bag shape. Also, an ink flow passage bulges outwardly of the ink pack is formed from at least one of interior surfaces of the flexible material. Assuming *arguendo* that the conduit 34 and fin 22, which are shown in Fig. 1 of the reference, generally correspond to an ink flow passage, it is not formed from at least one of the interior surfaces of a flexible material constituting the ink bag 13.

Thus, Applicants submit that claim 8 is patentable over Barinaga. Furthermore, during the interview, the Examiner tentatively agreed that Barinaga does not suggest the claimed features above.

IV. Rejection under 35 U.S.C. § 102(b) over U.S.P. 5,221,935 to Uzita (“Uzita”)

Claims 12-14, 16, 18-20, and 22-24 have been rejected under 35 U.S.C. § 102(b) as being anticipated by Uzita.

A. Claim 12

Applicants submit that claims 12 is not anticipated by (and would not have been obvious over) Uzita. For example, claim 12 relates to an ink cartridge that comprises an ink pack which is filled with ink and is formed into a flattened bag shape from flexible material. Furthermore, ink flow passages bulge outwardly of the ink pack and are formed from at least one interior

surface of the flexible material constituting the ink pack.

In contrast, assuming *arguendo* that the ink delivery portion 1 and the two rod members (not designated) in Figs. 9A and 9C of Uzita generally correspond to ink flow passages, they are not formed from at least one interior surface of flexible material constituting the ink bag 3.

Therefore, Applicants submit that claim 12 is patentable over Uzita. Furthermore, during the interview, the Examiner tentatively agreed that reference does not suggest the claimed features above.

B. Claim 13

As a preliminary matter, claim 13 has been rewritten in independent form and such amendments do not narrow the scope of the claim. Also, Applicants submit that claim 13 is patentable over Uzita.

For example, claim 13 relates to an ink cartridge that comprises an ink pack, and ink flow passages are formed by press-forming flexible material constituting the ink pack. Since the ink delivery portion 1 and rod members (not shown) are separate from the ink bag 3, they clearly do not suggest the claimed ink flow passages.

C. Claim 14

Since claim 14 depends upon claim 12, Applicants submit that it is patentable at least by virtue of its dependency.

D. Claim 16

Applicants submit that claim 16 is patentable over Uzita. For example, claim 16 relates to a flexible ink pack that comprises a protrusion and/or recess. The protrusion and/or recess is provided to at least one of the interior surfaces of the ink pack and is elongated substantially along a longer side of the substantially rectangular ink storage chamber. Furthermore, the protrusion and/or recess is attached to the interior surface of the substantially rectangular ink storage chamber pack at a location that is separated from an outer rectilinear edge of the substantially rectangular ink storage chamber.

As shown in Figs. 9A and 9C of Uzita, the ink delivery portion 1 and the two rod members (not designated) clearly do not suggest the features above. Also, during the interview, the Examiner tentatively agreed that reference does not suggest the claimed features above.

E. Claim 18

As a preliminary matter, claim 18 has been rewritten in independent form and such amendments do not narrow the scope of the claim. Also, Applicants submit that claim 18 is patentable over Uzita.

For example, claim 18 relates to an ink pack, and a protrusion and/or recess is provided to at least one of the interior surfaces of the ink pack ink. Furthermore, the recess is formed as a consequence of plastically deforming a part of a flexible film defining the one interior surface.

As shown in Figs. 9A and 9C of Uzita, the ink delivery portion 1 and the two rod members (not designated) clearly do not suggest the features above. Also, during the interview, the Examiner tentatively agreed that reference does not suggest the claimed features above.

F. Claims 19, 20, and 22-24

Since claims 19, 20, and 22-24 depend upon claim 16, Applicants submit that they are patentable at least by virtue of their dependency.

V. Rejection under 35 U.S.C. § 103(a) over Barinaga and Olsen

Claims 1-7 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Barinaga in view of Olsen.

A. Claim 1

On page 6 of the Office Action, the Examiner acknowledges that Barinaga does not teach the claimed contact prevention member. Furthermore, since Olsen does not suggest the contact prevention member recited in claim 1 for at least the features presented above, Applicants submit that claim 1 would not have been obvious over the references.

B. Claims 2-7

Since claims 2-7 depend upon claim 1, Applicants submit that they are patentable at least by virtue of their dependency.

VI. Rejection under 35 U.S.C. § 103(a) over Barinaga and Uzita

Claims 9-11 and 15 have been rejected under 35 U.S.C. § 103(a) as being anticipated by Barinaga in view of Uzita.

A. Claim 9

Applicants submit that claim 9 is patentable over Barinaga and Uzita. For example, claim 9 relates to an ink cartridge that comprises an ink pack, and an ink flow passage bulging outwardly of the ink pack is formed on at least one of interior surfaces of flexible material constituting the ink pack. Furthermore, the ink flow passage is formed by press-forming flexible material constituting the ink pack.

Applicants submit that the cited references (alone or in combination) do not suggest such features for reasons that are similar to the reasons presented above. Also, the Examiner tentatively agreed that Barinaga and Uzita do not suggest the claimed ink flow passage.

B. Claim 10

Since claim 10 depends upon claim 8 and since Uzita does not cure the deficient teachings of Barinaga with respect to claim 8, Applicants submit that claim 10 is patentable at least by virtue of its dependency.

C. Claim 11

Claim 11 depends upon claim 8, 9, or 10. Since Uzita does not cure the deficient teachings of Barinaga with respect to claim 8, Applicants submit that claim 11 is patentable at least by virtue of its dependency or at least for the reasons presented above in conjunction with claim 9.

D. Claim 15

Since claim 15 depends on claim 12, 13, or 14 and since Barinaga does not cure the deficient teachings of Uzita with respect to claims 12-14, Applicants submit that claim 15 is patentable at least by virtue of its dependency.

VII. Rejection under 35 U.S.C. § 103(a) over Uzita and Olsen

Claims 17 and 21 have been rejected under 35 U.S.C. § 103(a) as being anticipated by Uzita in view of Olsen. Since claims 17 and 21 depend on claim 16 and since Olsen does not cure the deficient teachings of Uzita with respect to claim 16, Applicants submit that such claims are patentable at least by virtue of their dependency.

VIII. Newly added claims

Applicants have added new claims 25-30 to provide more varied protection for the present invention.

IX. Conclusion

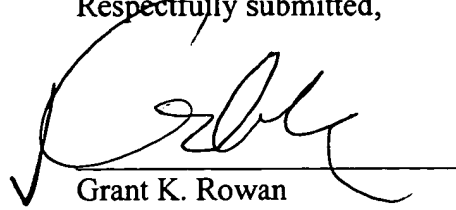
In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

Applicants hereby petition for any extension of time which may be required to maintain the pendency of this case, and any required fee, except for the Issue Fee, for such extension is to

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Appln. No. 09/832,180

be charged to Deposit Account No. 19-4880.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Grant K. Rowan', is written over a horizontal line. The signature is stylized with a large initial 'G' and a long, sweeping tail.

Grant K. Rowan
Registration No. 41,278

SUGHRUE MION, PLLC
2100 Pennsylvania Avenue, N.W.
Washington, D.C. 20037-3213
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

Date: June 6, 2002

APPENDIX

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE SPECIFICATION:

Please amend page 28, third full paragraph, in the following manner:

Two sheets of rectangular flexible material; for example, polyethylene films, are used for the ink pack 24. In order to improve the gas-barrier characteristic of the ink pack [1]24, aluminum foil or the like, for example, is laminated on the surface of each film.

Please amend the paragraph bridging pages 28 and 29 in the following manner:

Ink is filled into the ink pack 24 from the remaining one open side of the ink pack [1]24 formed into the bag. The remaining side is then joined by heat welding to provide the ink pack [1]24 sealing storing ink therein. Reference numeral 24c designates a heat-welded section in the remaining side.

IN THE CLAIMS:

The claims are amended as follows:

The claims have been amended in the following manner.

1. (Once amended) An ink cartridge for use with a recording apparatus, comprising:
an ink pack which is filled with ink and is formed into a flattened bag shape from flexible material, wherein the flattened bag shape corresponds to a geometric shape;
a case housing the ink pack and constituting an outer shell of the cartridge; and

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Appln. No. 09/832,180

a contact prevention member which is provided within the ink pack for preventing close contact between interior surfaces of the ink pack, caused due to a reduction of ink in the ink pack, thereby ensuring an ink flow passage,

wherein the contact prevention member is attached to the interior surface of the ink pack and is disposed at a location that is separated from an outer edge of the ink pack corresponding to the geometric shape.

103 8. (Once amended) An ink cartridge for use with a recording apparatus, comprising:
an ink pack which is filled with ink and is formed into a flattened bag shape from flexible material; and

a case housing the ink pack and constituting an outer shell of the cartridge;
wherein the ink cartridge is loaded to the recording apparatus so that surfaces of the flattened ink pack are oriented in a substantially vertical state, and

wherein an ink flow passage[s] bulging outwardly of the ink pack is formed [on] from at least one of interior surfaces of the flexible material constituting the ink pack to extend along a gravity direction lower side of the ink pack.

103 9. (Once amended) An [The] ink cartridge [according to claim 8,] for use with a recording apparatus, comprising:

an ink pack which is filled with ink and is formed into a flattened bag shape from flexible material; and

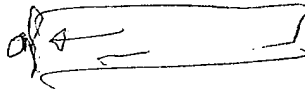
a case housing the ink pack and constituting an outer shell of the cartridge;

wherein the ink cartridge is loaded to the recording apparatus so that surfaces of the flattened ink pack are oriented in a substantially vertical state,

wherein an ink flow passage bulging outwardly of the ink pack is formed on at least one of interior surfaces of flexible material constituting the ink pack to extend along a gravity direction lower side of the ink pack, and

wherein the ink flow passage is formed by press-forming flexible material constituting the ink pack.

12. (Once amended) An ink cartridge for use with a recording apparatus, comprising:
an ink pack which is filled with ink and is formed into a flattened bag shape from flexible material; and



a case housing the ink pack and constituting an outer shell of the cartridge;
wherein the ink cartridge is loaded to the recording apparatus so that surfaces of the flattened ink pack are oriented in a substantially horizontal state, and

wherein ink flow passages bulging outwardly of the ink pack are formed [on] from at least one of interior surfaces of the flexible material constituting the ink pack to extend along respective sides of the ink pack perpendicular to a side in which an ink outlet port is formed.

13. (Once amended) An [The] ink cartridge [according to claim 12,] for use with a recording apparatus, comprising:

an ink pack which is filled with ink and is formed into a flattened bag shape from flexible material; and

a case housing the ink pack and constituting an outer shell of the cartridge;
wherein the ink cartridge is loaded to the recording apparatus so that surfaces of the
flattened ink pack are oriented in a substantially horizontal state,
wherein ink flow passages bulging outwardly of the ink pack are formed on at least one
of interior surfaces of flexible material constituting the ink pack to extend along respective sides
of the ink pack perpendicular to a side in which an ink outlet port is formed, and
wherein the ink flow passages are formed by press-forming flexible material constituting
the ink pack.

16. (Once amended) A flexible ink pack having opposing interior surfaces defining a
substantially rectangular ink storage chamber, the flexible ink pack comprising:

a plug member provided to a shorter side of the substantially rectangular ink storage
chamber; and

a protrusion and/or recess provided to at least one of the interior surfaces of the ink pack,
and elongated substantially along a longer side of the substantially rectangular ink storage
chamber,

wherein the protrusion and/or recess is attached to the interior surface of the substantially
rectangular ink storage chamber pack at a location that is separated from an outer rectilinear edge
of the substantially rectangular ink storage chamber.

18. (Once amended) A [The] flexible ink pack [according to claim 16,] having
opposing interior surfaces defining a substantially rectangular ink storage chamber, the flexible

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Appln. No. 09/832,180

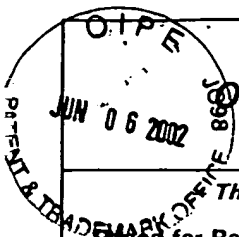
ink pack comprising:

a plug member provided to a shorter side of the substantially rectangular ink storage chamber; and

a protrusion and/or recess provided to at least one of the interior surfaces of the ink pack, and elongated substantially along a longer side of the substantially rectangular ink storage chamber,

wherein the recess is formed as a consequence of plastically deforming a part of a flexible film defining the one interior surface.

Claims 25-30 are added as new claims.



Office Action Summary

Application No.

09/832,180

Applicant(s)

ISHIZAWA ET AL.

Examiner

ANH VO

Art Unit

2861



The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☐ Responsive to communication(s) filed on _____

2a) ☒ This action is FINAL.

2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 1-24 is/are pending in the application.

4a) Of the above, claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) 1-24 is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

a) ☒ All b) ☐ Some* c) ☐ None of:

1. ☒ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. _____

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15) ☒ Notice of References Cited (PTO-892)

18) ☐ Interview Summary (PTO-413) Paper No(s). _____

16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

19) ☐ Notice of Informal Patent Application (PTO-152)

17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____

20) ☐ Other: _____

RECEIVED
JUN 11 2002
TC 2800 MAIL ROOM

19